IN THE CLAIMS

Amended claims follow:

1.      (Currently Amended) A method for facilitating distributed function discovery in a peer-to-peer network, comprising:

receiving a broadcast request for a service function from a peer client at a peer server;

locating information regarding a location remote to the peer server having the requested service function using a stored list of service functions locally stored at the peer server; and

responding to the peer client with a response containing the location remote to the peer server if information on the requested service function is located;

wherein said peer server listens for a broadcast response packet from the peer client over the network for a randomly generated delay response period prior to said responding, wherein said responding is only performed upon non-receipt of the response packet at expiry of the delay response period, and said responding is cancelled upon receipt of the broadcast response packet during the randomly generated delay response period.

2. – 4.   (Cancelled)

5.      (Original) A method for facilitating distributed function discovery of claim 1, wherein the response is digitally signed.

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6.      (Original) A method for facilitating distributed function discovery of claim 5, wherein the digitally signed response is signed by a 1024-bit VeriSign digital certificate.

7.      (Original) A method for facilitating distributed function discovery of claim 1, further comprising:

receiving a packet regarding a remotely located designated service function provider; and

storing information regarding the remotely located designated service function provider.

8.      (Currently Amended) A method for distributed function discovery in a peer-to-peer network, comprising:

broadcasting a packet requesting a service function;

receiving a response from a responding peer server, the packet containing information regarding a designated provider for the requested service function, the information including a location of the designated provider remote to the responding peer server; and

accessing the requested service function from the designated service provider at the location specified in the response of the responding peer server;

wherein said peer server listens for a broadcast response packet from a peer client over the network for a randomly generated delay response period prior to said responding, wherein said response is only performed upon non-receipt of the response packet at expiry of the delay response period, and said responds is cancelled upon

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receipt of the broadcast response packet during the randomly generated delay response period.

9.      (Original)  A method for distributed function discovery in a peer-to-peer network of claim 8, wherein the response is digitally signed.

10.      (Original) A method for distributed function discovery in a peer-to-peer network of claim 9, wherein the digitally signed response is signed by a 1024-bit VeriSign digital certificate.

11.      (Currently Amended) A computer program product for facilitating distributed function discovery in a peer-to-peer network, comprising:

computer code that receives a broadcast request for a service function from a peer client at a peer server;

computer code that locates information regarding a location remote to the peer server having the requested service function using a stored list of service functions locally stored at the peer server;

computer code that responds to the peer client with a response containing the location remote to the peer server if information on the requested service function is located; and

a computer readable medium that stores said computer codes;

wherein said peer server listens for a broadcast response packet from the peer client over the network for a randomly generated delay response period prior to said responding, wherein said responding is only performed upon non-receipt of the response packet at expiry of the delay response period, and said responding is cancelled

upon receipt of the broadcast response packet during the randomly generated delay response period.

12. – 14.    (Cancelled)

15.    (Original) A computer program product for facilitating distributed function discovery of claim 11, wherein the response is digitally signed.

16.    (Original) A computer program product for facilitating distributed function discovery of claim 15, wherein the digitally signed response is signed by a 1024-bit VeriSign digital certificate.

17.    (Original) A computer program product for facilitating distributed function discovery of claim 11, further comprising:

    computer code that receives a packet regarding a remotely located designated service function provider; and

    computer code that stores information regarding the remotely located designated service function provider.

18.    (Currently Amended) A computer program product for distributed function discovery in a peer-to-peer network, comprising:

    computer code that broadcasts a packet requesting a service function;

    computer code that receives a response from a responding peer server, the packet containing information regarding a designated provider for the requested service function, the information including a location of the designated provider remote to the responding peer server;

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computer code that accesses the requested service function from the designated service provider at the location specified in the response of the responding peer server; and

a computer readable medium that stores said computer codes;

wherein said peer server listens for a broadcast response packet from a peer client over the network for a randomly generated delay response period prior to said responding, wherein said response is only performed upon non-receipt of the response packet at expiry of the delay response period, and said response is cancelled upon receipt of the broadcast response packet during the randomly generated delay response period.

19.    (Original) A computer program product for distributed function discovery of claim 18, wherein the response is digitally signed.

20.    (Original) A computer program product for distributed function discovery of claim 19, wherein the digitally signed response is signed by a 1024-bit VeriSign digital certificate.

21.    (New) A method for facilitating distributed function discovery of claim 1, wherein the randomly generated delay ensures that responses performed by a plurality of the peer servers are distributed among the peer servers.

22.    (New) A method for distributed function discovery in a peer-to-peer network of claim 8, wherein the randomly generated delay ensures that responses performed by a plurality of the peer servers are distributed among the peer servers.

23.      (New) A computer program product for facilitating distributed function discovery of claim 11, wherein the randomly generated delay ensures that responses performed by a plurality of the peer servers are distributed among the peer servers.

24.      (New) A computer program product for distributed function discovery of claim 18, wherein the randomly generated delay ensures that responses performed by a plurality of the peer servers are distributed among the peer servers.

25.      (New) A method for facilitating distributed function discovery of claim 1, wherein the broadcast request includes the following format:
<service type = "X" version = "X" ID = "X" method = "X" href = http://X
acceptprotoco = "X".

26.      (New) A method for distributed function discovery in a peer-to-peer network of claim 8, wherein the packet includes the following format:
<service type = "X" version = "X" ID = "X" method = "X" href = http://X
acceptprotoco = "X".

27.      (New) A computer program product for facilitating distributed function discovery of claim 11, wherein the broadcast request includes the following format:
<service type = "X" version = "X" ID = "X" method = "X" href = http://X
acceptprotoco = "X".

28.      (New) A computer program product for distributed function discovery of claim 18, wherein the packet includes the following format:
<service type = "X" version = "X" ID = "X" method = "X" href = http://X
acceptprotoco = "X".